

CLAIMS

1. A process for securing a communication between a recognition device and an identification unit able to communicate with the recognition device by a data exchange determined by a recognition protocol, one of these items of data corresponding to a reference event (R), the process is able to communicate in such a way that the recognition device can authenticate the identification unit so as to instruct the unlocking of openable panels of a vehicle and/or permit the starting of a vehicle and furthermore comprises:
  - after an initialization time (T0) defined with respect to the reference event (R) of the recognition protocol, a step of transmission by the recognition device of at least two transmission data (P1, P2),
  - a step of transmission by the identification unit of at least two response data (P1R, P2R) in response to the transmission data (P1, P2),
  - a step of measuring a reaction time (Tr) between the transmission of a data item (P1) and the reception of a corresponding response data item (P1R) by the recognition device, and a step of verifying that the measured reaction time is less than a predetermined thresholdwherein the time interval (T) between the transmission of two successive transmission data (P1, P2) and/or the initialization time (T0) are/is made to vary randomly.
2. The process as claimed in claim 1, in which at least the time interval (T) between the transmission of two successive transmission data (P1, P2) is made to vary in the course of the same exchange of data between the recognition device and the identification unit.

3. The process as claimed in one of claims 1 or 2, in which the time interval (T) between the transmission of two successive transmission data (P1, P2) and/or the initialization time (T0) are/is made to vary with each exchange of data between the recognition device and the identification unit.
4. The process as claimed in one of claims 1 to 3, furthermore comprising an authentication phase (AUT) comprising in particular a wakeup step (RE), a request step (RQ), an anticollision step (ANT), a selection step (SE) and possibly a response step (RP).
5. The process as claimed in one of claims 1 to 4, in which the step of transmission by the recognition device consists in the transmission of several transmission data (P1, P2, P3) and the step of transmission by the identification unit consists in the transmission of several corresponding response data (P1R, P2R, P3R) and furthermore comprising:
- a step of measuring several reaction times (Tr) between the transmission and the reception of several data (P1, P2, P3, P4),
  - a step of calculating the average of these reaction times,
  - and a step of comparing the latter with the predetermined threshold so as to authenticate the identification unit.
6. The process as claimed in one of claims 1 to 5, in which the reaction times (Tr) are the n smallest reaction times measured, n being a predefined integer.
7. The process as claimed in one of claims 1 to 5, in which the reference event (R) of the recognition

protocol corresponds to the dispatching of a response datum (RP) by the identification unit.

- 5 8. The process as claimed in one of claims 1 to 5, in which the reference event (R) of the recognition protocol corresponds to the dispatching of a selection datum (SE) by the recognition device.
- 10 9. The process as claimed in one of claims 1 to 5, in which the reference event (R) of the recognition protocol corresponds to the dispatching of a initialization datum (RE) by the recognition device.